CF

ANCHORAGE WATER & WASTEWATER UTILITY

Operations Division
325 East 94th Court
Anchorage, Alaska 99515-2111
Telephone: (907) 267-4505

Tom Fink,
Mayor

Owned by the Municipality
of Anchorage

February 1, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chuck Findley, Director
Water Division, WD 131
U. S. EPA, Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Re: Anchorage Pt. Woronzof Monitoring Program
NPDES Permit AK-002255-1
ODES Data Submittal

Dear Mr. Findley:

As required by our NPDES permit, please find enclosed the Pt. Woronzof ODES data for 1992 monitoring year. This submission includes in-plant influent, effluent, and sludge data for the period of October, 1991 through September, 1992. Receiving water data are also included in this submission. The ODES data are encoded on IBM PC-compatible hard diskettes.

Please contact me with any questions or comments regarding this submittal. Thank you.

Sincerely,

Robert L. LeVar

Robert LeVar
Water Treatment Superintendent
Operations Division, AWWU

Enclosures

cc w/o encl.: Jan Hastings, ODES Coordinator, EPA
Greg Kellogg, Chief, Compliance Section, EPA
Robert Dolan, Environmental Engineer, ADEC

[wwmah]2

DESCRIPTION OF BACTERIOLOGICAL DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers of the following questions are requested for each set of benthic data submitted for addition to ODES. Please attach extra pages as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

Data set ID#: MOA92BCV.DAT File Type: 009

Submitter: KINNETIC LABORATORIES, INC.

Please give the name of an individual who can be contacted for additional information concerning this data set:

Mark Savoie
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, AK 99510
(907) 276-6178

1. If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

   none

2. Please describe the goals of the sampling program.

   The objectives of this program were to determine the level of bacterial contamination of the Inlet's nearshore waters. To determine compliance with the NPDES permit, State and Federal water quality standards, and regulatory criteria of Section 301 (h) of the Clean Water Act. Daily effluent measurements at the wastewater treatment plant were conducted to monitor the effectiveness of the plant's performance. Flood, ebb and control samples were measured to track the distribution and fate of bacteria into the Knik Arm. Intertidal zone sampling was conducted to determine if bacterial contamination occured

in the Inlet's nearshore waters, and to determine the adequacy of the total residual chlorine effluent limitation for protecting water quality. For further information see section 1.2.2 of the Annual Report.

3. Please describe the station distribution. If stations were distributed randomly, regularly, or in some other fashion, please note. If stations were selected in order to characterize some particular feature (e.g., an effluent source) rather than the water body as a whole, please identify this feature.

   For a description of sampling rational and protocol see section 1.2.2 of the Annual Report.

4. Were sampling times chosen in relation to a local discharge? If so, were samples taken at peak, slack, or some other discharge period?

   no

5. Did sampling times occur during an unusual event that might affect the interpretation of the data (e.g., a toxic spill, 100-year storm event, etc.)?

   no

6. Please describe sampling gear and techniques used for sample collection. What procedures were included to maintain sterility or prevent contamination?

   Presterilized sample bottles supplied by the analytical laboratory were used; a technician from the laboratory was present to ensure that no contamination occured due to improper sampling procedures.

7. How were samples transported, and what were storage conditions and holding times prior to analysis? Were samples pre-treated (e.g., addition or dechlorinating or chelating agents)?

   Samples were refrigerated and culturing was initiated within the allowed holding times.

8. What microbial taxa were analyzed and what methods were used? If standard techniques, include a reference and describe any modifications.

   Receiving water samples were analyzed for Fecal Coliform and Enterococci using standard techniques as submitted in the ODES data file. The daily monitoring by the treatment plant was analyzed for Fecal Coliform only, using the standard techniques used in the ODES data file.

9. Please describe the QA/QC steps followed during the bacteriological assays. Examples

of passable information to include are procedures for verification of positive samples, measurements of blanks or background, duplicate analyses, replicate field samples, laboratory certification, etc.

Triplicate analysis of control samples was performed on receiving water samples. The same laboratory analyzed the other receiving water samples using standard procedures.

10. Please describe any features of this data set which may affect its use to generally characterize environmental conditions.

none

11. If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES file type(s).

AN144E
AN144W

12. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report, November 1991 - October 1992, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.

DESCRIPTION OF INFLUENT/EFFLUENT DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers for the following questions are requested for each influent/effluent file submitted for addition to ODES. Please attach extra pages, as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

Data Set ID#: M91EFLQ4.DAT M92EFLQ1.DAT File Type: 144E
M92EFLQ2.DAT M92EFLQ3.DAT

Submitter: KINNETIC LABORATORIES, INC.

Please give the name of an individual who can be contacted for additional information concerning this data set:

Mark A. Savoie
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, Alaska 99501-3515
(907) 276-6178

1. If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

   The Series identification field was not used.

2. Please describe the goals of the sampling program.

   The objective of influent, effluent, and sludge monitoring is to characterize the nature and concentrations of pollutants in wastewater and treated wastewater, thereby providing data for monitoring plant performance.

3. Please describe the equipment and techniques used for sample collection, in particular, the use of composite and grab samples for particular types of analyses is important to note. Please confirm the frequency and duration of composite sample collection.

24 hour flow composite samples were taken for daily influent and effluent analyses performed by the Point Woronzof laboratory. The unit used for flow composite sampling was an ISCO Model 3700 FR autosampler. Daily sludge analyses were performed on a composite of three grab samples of dewatered sludge taken every 8 hours.

Analyses for the Summer-dry and Summer-wet sampling were performed on composite samples consisting of 24 one hour grab samples of influent and effluent water, and composites of 24 one hour grab samples of dewatered sludge.

4. How were samples handled during transportation and storage?

Samples were refrigerated prior to shipping. Samples were shipped to analytical laboratories in coolers with ice packs. Chain of custody forms were utilized for all samples. Adherence to holding times was observed.

5. Were field and transport blanks collected and analyzed?

Field sample blanks were not appropriate to the study and were therefore not utilized. Trip blanks were not used.

6. What component of the sample was analyzed, i.e., whole water, dissolved fraction, or suspended particulate? If whole water was fractioned into suspended and dissolved parts, what filter size was used?

Whole water samples were analyzed.

7. Please provide the following information on analytical techniques for each class of chemical compounds. (Please attach on a separate sheet).

Analyte	Sample Size	Container Type and Preparation	Sample Preservation	Holding Time Range	Method	Instrumentation	Detection Limits

This data is already incorporated in the ODES data set for each chemical compound. For further information please consult Table 3 and Appendices A,B, and E of the Monitoring Program Annual Report.

8. Please provide the following information on the frequency of laboratory quality control checks and provide a copy of the results of any such analyses. (Please attach information on a separate sheet)

Analyte	No. of Samples	No. of Duplicates	No. of Blanks	Matrix Spike			Analytical Standards	
				Number	Material	Amount	Number	Material Used

This information may be found in the Quality Assurance Manuals and Statement of Qualifications of the analytical laboratories used in this monitoring program. This material was mailed to Tetra Tech on 11 June 1991. For further information please consult Appendices A, B, and E of the Monitoring Program Annual Report.

9. If results submitted to ODES have been corrected for blanks or recovery response, please describe the manner in which this has been done.

Concentrations of metals, cyanide, total residual chlorine, and oil and grease, monitored monthly by the Point Woronzof laboratory, and metals measured by ToxScan Inc. have been background subtracted (subtraction of method blank).

Blank and recovery response data are contained in sets beginning with the 'Z' record type. 'F' record fields 84-86, 87-89, and 90-92 are used to tie sample data to method blank, surrogate, spike, and duplicate quality assurance data.

10. Please describe any features of this data set which may affect its use to generally characterize environmental data.

1) Sludge matrix spikes for EPA 8240 and 8270 were run on two days bracketing the date of actual sample extraction.

2) The surrogates for EPA 8270 analysis of the sludge sample were not reported due to overdilution during analysis.

3) Sample data with alphanumeric designations IN, EF, and SL indicates sample analysis by laboratories other than the Point Woronzof laboratory.

11. Please describe the quality assurance/quality control procedures used to verify the correct coding and entry of data.

Daily monitoring data was double-keypunched and verified. Data for the July and August Summer-dry/Summer-wet samplings was double-checked against laboratory data sheets.

12. If any other types of data were collected concurrently which have been or will be added

to ODES, please indicate the appropriate ODES file type(s).

File types AN144W and AN009.

13. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report, November 1991 - October 1992, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.

DESCRIPTION OF RECEIVING WATER DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers of the following questions are requested for each set of benthic data submitted for addition to ODES. Please attach extra pages as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

Data set ID#: MOA92WQ.DAT File Type: 144W

Submitter: KINNETIC LABORATORIES, INC.

Please give the name of an individual who can be contacted for additional information concerning this data set:

Mark Savoie
Kinnetic Laboratories, Inc.
403 West 8th Avenue
Anchorage, AK 99510
(907) 276-6178

1. If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

   none

2. Please describe the goals of the sampling program.

   To determine compliance with the NPDES Permit, State and Federal water quality standards, and regulatory criteria of section 301 (h) of the Clean Water Act.

3. Please describe the distribution of the sampling stations throughout the water body sampled. If stations were selected in order to characterize some particular feature (e.g., an effluent source), please identify this feature and present the rationale for the placement of stations in relation to this feature.

   Plume dispersion via periodic sampling at drogue drift stations. See Section 1.2.2 of the

Annual Report.

4. Please describe the gear, any special features of its application and techniques used for sample collection.

Window-shade drogues, Niskin bottles, Seabird SBE-19 CTD casts

5. How were samples collected and handled during transportation? How were samples stored?

Samples were refrigerated and shipped to laboratories in coolers with Blue Ice within 24 hours of collection.

6. What component of the sample was analyzed, i.e., whole water, dissolved fraction, or suspended particulates?

Metal analysis was performed on the dissolved fraction of samples, all other measurements were performed on whole water samples.

7. Please provide the following information on analytical techniques for each class of chemical compounds. (Please attach on a separate sheet.)

This information is provided in the ODES data submission, and in the Appendices of the Monitoring Annual Report.

8. Please provide the following information on the frequency of laboratory quality control checks and provide a copy of the results of any such analyses. (Please attach information on a separate sheet.)

Please refer to the Appendices of the Monitoring Program Annual Report.

9. If results submitted to ODES have been corrected for blanks or recovery response, please describe the manner in which this has been done.

Blank data and blank corrected sample concentration has been submitted to ODES for metals. Values submitted for total residual chlorine are blank corrected as far as that the instrument has an automatic zeroing function. Values presented for total hydrocarbons, oil and grease, and aromatic hydrocarbons are raw values, QA/QC information is provided in the Z record.

10. Please describe any features of this data set which may affect its use to generally characterize environmental data.

none

11. Please describe the quality assurance/quality control procedures used to verify the correct coding and entry of data.

All data was entered using Tetra Tech's ODES2 data entry program. Data were then checked visually.

12. If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES file type(s).

AN144E
AN009
AN144W
AN144W --- Additional water quality chemical data will be submitted with this data set. Additional codes were requested from Tetra Tech in order to complete the data entry of aliphatic and aromatic hydrocarbon values collected this sampling period.

13. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report, November 1991 - October 1992, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.